

PRC Consoer Townsend, Inc. (1982) of the freshwater upstream from the saltwater-freshwater interface indicated that the freshwater could be treated and used for drinking water.

Purpose and Scope

This report describes the results of a study to evaluate the freshwater supply potential of the AICW in the vicinity of Myrtle Beach. The study includes calculation of daily discharge, estimating the magnitude and frequency of low flows, and determining the effects of water-supply withdrawals on the position of the saltwater-freshwater interface in the AICW in the vicinity of Myrtle Beach.

Description of Study Area

The study area includes much of eastern South Carolina, but is centered on that reach of the AICW from Myrtle Beach to near Little River, South Carolina (fig. 1). Extensive swamps border much of the near-coast part of the major streams in the Pee Dee River basin. The flow system near the coast is very complex (fig. 2). The majority of the flow of the Pee Dee River enters the AICW through Bull Creek. Freshwater flows both north and south in the AICW and discharges to the Atlantic Ocean at Winyah Bay and Little River Inlet.

The drainage area of the Pee Dee River basin is approximately 18,500 mi². Based on data from streamflow gaging stations on the Pee Dee River and major tributaries, the average discharge for the basin is in excess of 15,000 ft³/s (cubic feet per second) (table 1).

Table 1.--Gaging stations on major tributary streams of the Atlantic Intracoastal Waterway in the vicinity of Myrtle Beach, South Carolina

Station number	Station name	Drainage area (square miles)	Average discharge (cubic feet per second)
02110500	Waccamaw River near Longs	1,110	1,220
02131000	Pee Dee River at Pee Dee	8,830	9,870
02132000	Lynches River at Effingham	1,030	1,040
02135000	Little Pee Dee River at Galivants Ferry	2,790	3,200

The AICW in the study reach is basically a canal with well-defined banks that has been excavated to a minimum of 12 feet below mean low tide. The flow in the AICW near Myrtle Beach is governed by the flow of four major streams (see fig. 1) in the Pee Dee River basin (the Waccamaw, Pee Dee, Little Pee Dee, and Lynches Rivers) and by Atlantic Ocean tidal fluctuations.